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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,100	12/10/2001	Prathima Agrawal	APP 1409-US	7915

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TELCORDIA TECHNOLOGIES, INC.
ONE TELCORDIA DRIVE 5G116
PISCATAWAY, NJ 08854-4157

EXAMINER	
SAGAR, VIDYA S	

ART UNIT	PAPER NUMBER
2668	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,100	AGRAWAL ET AL.	
	Examiner	Art Unit	
	Vidya Sagar	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *12/10/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

The claim 6 is objected to because of the following informalities: In claim 6 the word "Bluebook" should be "Bluetooth". Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peter Balogh (US 2001/0024953 A1) in view of, Rautiola, et al., (U.S. 6,853,851 B1)

Regarding claim 1 and 11 Balogh teaches, a radio terminal for supporting packet transmission, which comprises: a core (Fig. 5, element CPU);
means associated with the core for receiving connection requests for packets to be transmitted (Fig. 5, element Tx/Rx, column 0049, lines 5-8 where it cites Tx/Rx, where it cites the transceiver Tx/Rx may be typical 802.11 compliant transmitting and

receiving equipment for transmitting and receiving data over the radio interface; selector(Fig. 4, elements 405-412, column 39, lines 7-21 column, where the MS compares the connection attributes of access points with the same network name as the currently serving access point and selects access point with the best connection attributes.); interface manager responsive to each connection request for determining operating mode of the selector in accordance with a selected transmission condition(s) on the first and second channels(Fig. 4, paragraph 0042, lines 1-13 where the MS compares 406 one or more connection attributes of the first and the second access point. Also it is checked 407 whether the differences between the compared connection attributes of the first and the second access point fulfill pre-determined conditions. The pre-determined conditions may comprise conditions for different connection attributes related to the access point comparison which is analogous to the interface manager deciding upon operating modes of the claimed invention).

Balogh does not teach at least one first interface associated with the core for supporting radio transmission within a first frequency range over an associated first channel in accordance with a first transmission protocol . However Rautiola teaches (Fig.2, elements 21, 22, column 6, lines 36-38 the mobile station connects to a personal base either with a infra-red connection or with low power). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the first interface of Rautiola to Balogh's radio terminal. Motivation being to overlap telecommunication networks at low cost;

Balogh does not teach at least one second interface associated with the core for independently supporting radio transmission within the first frequency range over an associated second channel in accordance with a second transmission protocol. However Rautiola teaches (Fig.2, elements 21, 23, column 6, lines 39-40 the mobile station connects to a GSM base transceiver station(BTS). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the first interface of Rautiola to Balogh's radio terminal Motivation being to overlap telecommunication networks at low cost;

Regarding claim 2 and 12 Balogh teaches a Bluetooth protocol (Paragraph 0052, lines 4-7 where besides other networking techniques Bluetooth is also used.)

Regarding claim 3 and 13 Balogh teaches an 802.11 protocol (Paragraph 0017, lines 1-5 where it is stated that 802.11 protocol is used).

Regarding claim 4, Balogh teaches signal strength (paragraph 10, lines 1-3 where it mentions that in one embodiment of the invention, the connection attributes are determined based on signal levels of available access points includes an indication of received signal strength on the respective first and second channels and this is same as the signal strength of the claimed invention.

Regarding claim 6, Balogh teaches --Bluetooth access point (Paragraph 0052,

lines 4-7 where besides other networking techniques Bluetooth is also used.) and 802.11 access points (Paragraph 0017, lines 1-5 where it is stated that 802.11 protocol is used) are respectively contestable to the first and second interfaces through the first and second channels (Paragraph 0052, lines 4-7), and in which the selected transmission condition includes an indication of the usage levels of the access points respectively connectable to the first and second channels (paragraph 0010, lines 1-2).

Regarding claim 7, Balogh teaches the interface manager comprises, in combination, first means for collecting at first intervals, through the First interface, first samples representative of the selected transmission Condition on the first channel, and second means for collecting at second Intervals, through the second interface, second samples representative of the selected transmission condition on the second channel (Fig. 1, element MS, Fig. 4, element 401 where it is cited that Paragraph 0038, lines 4-6 where it is cited that, the terminal MS collects 401 information advantageously periodically about the available access points and this is similar to collecting transmission conditions of the claimed invention).

Regarding claim 8, Balogh teaches first and second means individually coupled to the first and second collecting means for locally storing, over separately selectable times, the respective first and second samples (paragraph 29, lines 5-9, paragraph 32) where a smart card reader is cited to be used potentially as a storing means and also that probing is done for responses at many times.

Regarding claim 9, Balogh first means for comparing a stored first sample with a reference metric to obtain a first indicator, second means for comparing a stored second sample with the reference metric to obtain a second indicator, and means responsive to each connection request for individually operating the selector in the first and second modes when the first indicator is greater and lesser, respectively, than the second indicator is anticipated (Fig. 1, element MS, Fig. 4, elements 406, 407, 408, 409, 410, 411, 412 where comparisons of attributes is done).

Regarding claim 10, Balogh teaches a terminal as defined in claim 9, further comprising means associated with the first and second comparing means and responsive to each connection request for adjusting the first and second indicators in accordance with selected criteria associated with the connection request (paragraph 0044, where its cites that, if the user does not want to connect the second access point or if advantageously at least one of the pre-determined conditions can not be fulfilled, it is checked whether the first access point is the currently serving access point. If not, the second access point may be connected which is same as the means of comparison and response for adjusting indicators of the claimed invention).

Balogh does not teach means operable between first and second selectable modes for respectively routing the packets to be transmitted to a separate one of the first and second channels. However Rautiola teaches a multiplexer (Fig.12, element 27 which is similar to the means for selection between modes selector of the claimed

invention). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multiplexer of Rautiola to Balogh's radio terminal. Motivation being ability to select channels based on transmission conditions and thus have reliable communications.

Regarding claim 14, Balogh teaches, a radio terminal for supporting packet transmission, which comprises: a core (Fig. 5, element CPU); means associated with the core for receiving connection requests for packets to be transmitted (Fig. 5, element Tx/Rx, column 0049, lines 5-8 where it cites Tx/Rx, column 0049, lines 5-8 where it cites the transceiver Tx/Rx may be typical 802.11 compliant transmitting and receiving equipment for transmitting and receiving data over the radio interface;

Balogh teaches, first means for collecting at first intervals, through the First interface, first samples representative of the selected transmission Condition on the first channel, and (Fig. 1, element MS, Fig. 4, element 401 where it is cited that Paragraph 0038, lines 4-6 where it is cited that, the terminal MS collects 401 information advantageously periodically about the available access points and this is similar to collecting transmission conditions of the claimed invention).

Balogh teaches second means for collecting at second Intervals, through the second interface, second samples representative of the selected transmission condition on the second channel (Fig. 1, element MS, Fig. 4, element 401 where it is cited that Paragraph 0038, lines 4-6 where it is cited that, the terminal MS collects 401 information advantageously periodically about the available access points and this is

similar to collecting transmission conditions of the claimed invention).

Balogh teaches selector (Fig. 4, elements 405-412, column 39, lines 7-21 column, where the MS compares the connection attributes of access points with the same network name as the currently serving access point and selects access point with the best connection attributes.)

Balogh teaches first and second means individually coupled to the first and second collecting means for locally storing, over separately selectable times, the respective first and second samples (paragraph 29, lines 5-9, paragraph 32) where a smart card reader is cited to be used potentially as a storing means and also that probing is done for responses at many times.

Balogh teaches first means for comparing (paragraph 0010, lines 4-8 where comparison of current attributes is done with a predetermined set of attributes and which is similar to comparing the first stored samples with a reference metric.).

Balogh teaches second means for comparing (paragraph 0010, lines 4-8 where comparison of current attributes is done with a predetermined set of attributes and which is similar to comparing the second stored samples with a reference metric).

Balogh teaches means responsive to each connection request for individually operating the selector in the first and second modes when the first indicator is greater and lesser, respectively, than the second indicator is anticipated (Fig. 1, element MS, Fig. 4, elements 406, 407, 408, 409, 410, 411, 412 where comparisons are done).

Balogh does not teach at least one first interface associated with the core for supporting radio transmission within a first frequency range over an associated first

channel in accordance with a first transmission protocol. However Rautiola teaches (Fig.2, elements 21, 22, column 6, lines 36-38 the mobile station connects to a personal base either with a infra-red connection or with low power). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the first interface of Rautiola to Balogh's radio terminal. Motivation being to overlap telecommunication networks at low cost;

Balogh does not teach at least one second interface associated with the core for independently supporting radio transmission within the first frequency range over an associated second channel in accordance with a second transmission protocol. However Rautiola teaches (Fig.2, elements 21, 23 columns 6, lines 39-40 the mobile station connects to a GSM base transceiver station (BTS). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the first interface of Rautiola to Balogh's radio terminal Motivation being to overlap telecommunication networks at low cost;

Regarding claim 15, Balogh teaches a Bluetooth protocol (Paragraph 0052, lines 4-7 where besides other networking techniques Bluetooth is also used.)

Regarding 16 Balogh teaches an 802.11 protocol (Paragraph 0017, lines 1-5 where it is stated that 802.11 protocol is used).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peter

Balogh (US 2001/0024953 A1) in view of in view of, Rautiola, et al., (U.S. 6,853,851 B1), as applied to claim 1 above and in further view of Suzuki et al (Patent Number 4,771,424)

Regarding claim 5, Balogh and Rautiola teach all of claim 1. Balogh and Rautiola do not teach selected transmission condition which includes delays on channels. However Suzuki teaches selection based on transmission delay(Column 1, lines 55-67 where it cites that delay is a step, by which the center node estimates the state of delay of data for every relay line which the relevant switching node can select, when it sends data to one of the other switching nodes on the network, on the basis of information previously inputted, indicating the communication network configuration, and the state of delay of data reported by each of the switching nodes and which is similar to the selection of transmission based on transmission delays). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the delay of Rautiola to Balogh and Rautiola's radio terminal. Motivation being ability to have faster and reliable communications.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vidya Sagar whose telephone number is (571) 272-8196. The examiner can normally be reached on Monday thru Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Chieh Fan at can be reached 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vidya Sagar
Examiner
Art Unit 2666

VS

CHIEH M. FAN
PRIMARY EXAMINER